



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,181	03/02/2004	Masaya Tadano	021052C	3439
23850 7590 12/31/2007 KRATZ, QUINTOS & HANSON, LLP 1420 K Street, N.W. Suite 400 WASHINGTON, DC 20005			EXAMINER FREAY, CHARLES GRANT	
			ART UNIT 3746	PAPER NUMBER
			MAIL DATE 12/31/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/790,181

Applicant(s)

TADANO ET AL.

Examiner

Charles G. Freay

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-13, 29-33 and 45-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-13, 29-33 and 45-48 is/are rejected.
- 7) ☒ Claim(s) 49 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 10225442.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This office action is in response to the amendment of October 25, 2007. In making the below rejections the examiner has considered and addressed each of the applicant's arguments.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 45-48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. New claims 45 and 47 set forth that there are no sealing surfaces formed on the base of the bearing member. As noted below it is unclear what the "base" of the bearing member is meant to represent. However on the assumption, made by reading the applicant's arguments, that the base is the radially outer surface of the bearing member this limitation has not been previously disclosed. As taught by the applicant's disclosure the cover has a groove holding an o-ring. While the o-ring is in or carried by the cover it seals both against the cover and against a corresponding surface of the "base" of the bearing.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 45-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear what the base of the bearing member represents. It is unclear if the base is the outer surface of the bearing member or if it is the flat surface extending radially outwards and covering the plate. In either case the surface has sealing surfaces and therefore new matter is being set forth.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO '293 in view of Kim et al and Singletary et al as set forth in the previous office action (07/26/2007).

Claims 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO '293 in view of Roth et al as set forth in the previous office action.

Allowable Subject Matter

Claim 49 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed October 25, 2007 have been fully considered but they are not persuasive.

With regards to the rejections set forth in view of WO '293, Kim et al and Singletary the applicant makes reference to the portion of the claims referring to the gasket and the o-ring provided between an inner peripheral end surface of the cover and an outer peripheral surface of the bearing and also points out the thickness limitation with regards to the cover. In arguing these limitations the applicant repeatedly notes that the limitations provided an improvement over similar compressor, such as WO '293 which required a C ring to fix the plate inner peripheral surface to the bearing.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the cover not being fixed to the bearing by a C ring) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

With regards to the WO '293 reference the applicant argues the disclosure of WO '293 is not definite with regards to the showing of a gasket, O-ring and bushing. The applicant argues that the examiner cannot presume disclosure which is not supported.

The examiner disagrees that the disclosure of WO '293 is not definite with regards to the disclosure of an O-ring, gasket and bushing. The mechanical art of electric motor driven refrigerant compressors is a well developed and relatively uncomplicated art with regards to the limitations being discussed. An artisan of ordinary skill can learn many things from a disclosure, some of which may not be particularly discussed in words and with reference numerals and leader lines. One of ordinary skill would have understood from the figures of WO '293 the necessity or benefit of using the noted items.

The applicant further notes that while Kim and Singletary disclose the claimed elements they are not used in the particular arrangement as set forth by the claims. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The WO '293 disclosure in combination with the cited references make obvious the claimed invention.

The applicant further makes the argument at the top of page 12 that providing O-rings in the cover allows there to be no sealing surfaces on a base of the bearing and eliminates the need for a C-ring as used in the conventional compressor. The examiner

notes once again that the claims do not limit the invention to a cover which is not fixed by a C-ring. Furthermore the examiner makes reference to the rejections set forth under 35 USC 112, first and second paragraph above with regards to the sealing surface limitation and the base of the bearing.

With regards to the thickness limitation of claim 9 the applicant argues the prior art does not teach towards a specific thickness and also notes that the applicant experimented to find an optimum thickness for the purpose of noise reduction. The applicant argues that experimenting with the thickness when there is no explicit suggestion to do so is non-obvious.

The examiner disagrees with this argument. WO '293 teaches of the general construction of the compressor and the cover. The thickness is not discussed. However, the claim does not set forth any type of relationship between the thickness of the cover and the desired outcome of noise reduction which has been optimized. Adjusting the thickness of the plate would be obvious for a number of reasons. Reducing the amount of material used to construct a device and therefore reducing the cost of manufacturing the device is always a concern. As set forth in the rejection it would have been obvious to size the elements to obtain an arrangement which creates a durable and efficient compressor while also reducing the amount of material used to construct the device. The fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when

the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

With regards to the limitation of CO₂ the examiner does not agree that the material acted upon by the compressor limits the structure of the compressor. The applicant is directed to *Ex Parte Masham* (MPEP 2114) and *Ex parte Thibault and In re Young* (MPEP 2115). Nevertheless, U. S. Pat. No. 6,769,267, which is the U. S. national stage application of WO '293 states that the fluid acted upon by the compressor is carbon dioxide. Therefore, WO '293 does disclose that the refrigerant used in the wo '293 compressor is CO₂.

With regards to claim 12 the applicant states that the examiner has taken official notice and requested a reference to show that adding bolts is obvious. The examiner notes that the rejection was an obviousness rejection and official notice was not taken. As shown in *St. Regis Paper Co. v. Bemis Co.* 193 USPQ 8 (7th Cir. 1977) to duplicate parts for multiple effects would have been an obvious improvement. In the instant case it would have been obvious to include multiple bolts in order to securely hold the plate which is acted upon by the high pressure discharge gas against the discharge chamber.

With regards to claims 29 through 33 the applicant argues that while the Roth reference includes a bushing having carbon fibers it would be more appropriate to characterize the bearing as a thermoplastic bearing. The examiner notes that the term

"carbon bearing" is a broad term and that the Roth bearing is 30% carbon. Which is a significant amount. Therefore the Roth bearing, while it might be different from what the applicant intended a carbon bearing to be, is a carbon bearing.

With regards to claim 32 the applicant notes the portion of the specification referring to there being a bushing on the second bearing 54a but not on the first bearing 56a. The examiner notes that claim 32 only sets forth that the bushing is on the second bearing 56a. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., no bushing on one of the bearings) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ebara et al discloses the US patent version of WO '293. Shiraishi et al (JP '019) discloses a carbon bearing.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles G. Freay whose telephone number is 571-272-4827. The examiner can normally be reached on Monday through Friday 8:30 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/790,181
Art Unit: 3746

Page 10

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Charles G Freay
Primary Examiner
Art Unit 3746

CGF
December 17, 2007